

WHAT IS CLAIMED IS:

1. A method for vehicle-to-vehicle communication between a first vehicle and a second vehicle, the method comprising the acts of:

- providing an interrupt point;
- providing a first vehicle;
- providing a second vehicle, wherein second vehicle is located behind the interrupt point;
- providing a vehicle-to-vehicle communication apparatus in the first vehicle and in the second vehicle;
- transmitting an interrupt request from the first vehicle to the second vehicle;
- forming a network incorporating the first vehicle and the second vehicle;
- receiving the interrupt request; and
- responding to the interrupt request.

2. The method of Claim 1, wherein the vehicle-to-vehicle communication apparatus is connected to a navigation apparatus via an interface.

3. The method of Claim 1, further comprising the act of displaying the interrupt request and a positional relationship between the first vehicle and the second vehicle in the second vehicle.

4. The method of Claim 1, further comprising the act of automatically flashing a light in the second vehicle before the interrupt point if the interrupt request is acknowledged.

5. The method of Claim 1, further comprising the act of displaying acknowledgement of the interrupt request and data for identifying the second vehicle in the first vehicle.

6. The method of Claim 1, wherein the interrupt request is a request to enter a narrow road from one entrance when the second vehicle is also going to enter the narrow road from the other entrance.

7. A method for vehicle-to-vehicle communication between a first vehicle and a second vehicle, the method comprising the acts of:

- providing an interrupt point;
- providing a first vehicle;
- providing a second vehicle, wherein second vehicle is traveling in the same direction as the first vehicle;
- providing a vehicle-to-vehicle communication apparatus in the first vehicle and in the second vehicle;
- transmitting a inter-vehicle distance reduction request from the first vehicle to the second vehicle;
- forming a network incorporating the first vehicle and the second vehicle;
- receiving the inter-vehicle distance reduction request; and
- responding to the inter-vehicle distance reduction request.

8. The method of Claim 7, further comprising the act of transmitting image data showing a condition of an intersection.

9. A method for vehicle-to-vehicle communication between a first vehicle and a second vehicle, the method comprising the acts of:

- providing an interrupt point;
- providing a first vehicle;
- providing a second vehicle, wherein second vehicle is traveling in the same direction as the first vehicle;
- providing a vehicle-to-vehicle communication apparatus in the first vehicle and in the second vehicle;
- transmitting a clear route request from the first vehicle to the second vehicle;

forming a network incorporating the first vehicle and the second vehicle;
receiving the clear route request; and
responding to the clear route request.

10. The method of Claim 9 wherein the first vehicle is the emergency vehicle and wherein the second vehicle is a vehicle on a straight road and ahead of the emergency vehicle, a vehicle which is going to enter an intersection, or a vehicle which is driving through, in the same direction, the intersection together with the emergency vehicle.

11. The method of Claim 9, further comprising the acts of instructing the driver of the second vehicle to take a predetermined action to allow the emergency vehicle to pass.

12. The method of Claim 11 further wherein said predetermined action is determined by the distance from the second vehicle to the emergency vehicle and whether the second vehicle is on a straight road.

13. The method of Claim 11 further wherein said predetermined action is determined by the distance from the second vehicle to the emergency vehicle and whether the second vehicle is near the intersection.

14. A vehicle-to-vehicle communication apparatus for communication between a first vehicle and a second vehicle, the apparatus comprising:

a communication unit operable to transmit a request from a first vehicle to a second vehicle and receive another request from the second vehicle to the first vehicle; and

a vehicle-to-vehicle control unit operable to form a predetermined network with the second vehicle and respond to the request after the communication unit receives the request from the second vehicle;

wherein the communication unit is operable to receive a request to interrupt

sent from the first vehicle to the second vehicle on a main road when the second vehicle being located behind an interrupt point.

15. The vehicle-to-vehicle communication apparatus of Claim 14, wherein the apparatus of the second vehicle is operable to display the received interrupt request and a positional relationship between the first vehicle and the second vehicle on a display unit and wherein the apparatus of the second vehicle, if acknowledging the interrupt request, automatically flashes a light using an automatic light-flashing unit immediately before the interrupt point.

16. The vehicle-to-vehicle communication apparatus of Claim 15, wherein the display unit is located in a navigation apparatus connected to the vehicle-to-vehicle communication apparatus via an interface.

17. The vehicle-to-vehicle communication apparatus of Claim 16, wherein the vehicle-to-vehicle control unit of the first vehicle is operable to display acknowledgement of the interrupt request and data for identifying the second vehicle on the display unit.

18. The vehicle-to-vehicle communication apparatus of Claim 14, wherein the request to interrupt is a request to enter a narrow road when the second vehicle is also going to enter the narrow road from the other entrance.

19. A vehicle-to-vehicle communication apparatus for communication between a first vehicle and a second vehicle, the apparatus comprising:

a communication unit operable to transmit a request from a first vehicle to a second vehicle and receive another request from the second vehicle to the first vehicle; and

a vehicle-to-vehicle control unit operable to form a predetermined network with the second vehicle and respond to the request after the communication unit receives the request from the second vehicle;

wherein the communication unit is operable to receive a request to reduce an inter-vehicle distance from the first vehicle when the first vehicle and the second vehicle are in the same direction.

20. The vehicle-to-vehicle communication apparatus of Claim 19, further comprising a forward-facing camera for capturing an image of an intersection, wherein the vehicle-to-vehicle control unit of the first vehicle transmits the image captured by the camera together with the request to the second vehicle.

21. A vehicle-to-vehicle communication apparatus for communication between a first vehicle and a second vehicle, the apparatus comprising:

a communication unit operable to transmit a request from a first vehicle to a second vehicle and receive another request from the second vehicle to the first vehicle; and

a vehicle-to-vehicle control unit operable to form a predetermined network with the second vehicle and respond to the request after the communication unit receives the request from the second vehicle;

wherein the communication unit is operable to receive a request to clear the way for an emergency vehicle from the first vehicle.

22. The vehicle-to-vehicle communication apparatus of Claim 21, wherein the vehicle-to-vehicle control unit of the second vehicle instructs the driver of the second vehicle to take a predetermined action to allow an emergency vehicle to pass.